MICHIGAN DEPARTMENT OF HEALTH & HUMAN SERVICES

Michigan Regional Trauma Report

Region 5

Prepared by Robert Hale
Regional Trauma Coordinator
December 2014

[This page intentionally left blank]

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Michigan's Region 5 is located in Southwest Michigan, encompassing nine counties along the lakeshore and bordering Indiana. The population of 950,000 is served by 16 hospitals, including a Level I and a Level II American College of Surgeons Committee on Trauma (ACS-COT) verified center. The remaining hospitals are a mix of facilities that will be designated as Level III or Level IV by the State of Michigan, including three critical access hospitals.

Trauma referral patterns bring the majority of patients to the Kalamazoo tertiary facilities (Borgess and Bronson Methodist). Kalamazoo is located near the middle of the region along the I-94 corridor and is easily accessed by ground EMS. There are several hospital systems within the region impacting patient destination decisions. Bronson Healthcare owns hospitals in Battle Creek and Paw Paw, and has strong alliances with several unaffiliated hospitals. Borgess Medical Center owns two small facilities including a critical access hospital in Cass County. The Lakeland Health System is the third such organization and is made of up of Lakeland Regional St. Joseph, and two smaller facilities in Niles and Watervliet. Northern areas of the region often send patients to Region 6 (Grand Rapids area), and the extreme southwest corner refers a small number to Indiana (South Bend).

This annual report will review the current status of major initiatives, as well as break out each of the project areas described in the regional trauma work plan. This report meets the requirements for annual reporting as described in the trauma system administrative rules.

DEVELOPING THE REGIONAL TRAUMA NETWORK

The development of regional trauma networks is a key piece in the formation of a state wide trauma system. Planning began prior to 2009 when the original trauma rules were developed. Since then work has continued across each of the eight regions to put trauma systems in place. Early work in Region 5 began in 2010 with the formation of a regional coalition. From there, bylaws and a work plan were developed, and work continued for several years. After a brief pause in development, partners from across the region reorganized into a formal Regional Trauma Network (RTN) and Regional Trauma Advisory Committee (RTAC). These groups reviewed the previous bylaws, developed a three year work plan based on SMART objectives (Specific, Measurable, Attainable, Relevant and Time-bound), and were able to successfully receive recognition as a trauma network. Much effort has been put into the system, laying the ground work for hospital designation, data collection, and Regional Professional Standards Review Organization (RPRSO) activities. Great strides forward were made in FY2014 thanks to the hard work of all those involved.

RTN

The Regional Trauma Network is made up of the Medical Director (or designee) from each of the Medical Control Authorities (MCAs) within the region. This group functions as the executive board for the region, setting direction and approving deliverables sent up from the RTAC. Members of the RTN meet directly following the quarterly RTAC meetings.

RTAC

The Regional Trauma Advisory Committee provides subject matter expertise to the RTN. The group is made up of representatives from each of the EMS medical control authorities, a physician and non-physician representative from each hospital, three EMS agency representatives, four EMS practitioner representatives, and a non-affiliated trauma system consumer. Voting members are appointed in writing by their agency, with a supermajority needed to pass motions or approve work plans.

The RTAC utilizes a number of subcommittees as working groups. Currently there are 4 subcommittees of the RTAC: RPSRO, Medical Oversight, Injury Prevention, and Education.

WORK PLAN PROGRESS

In order to evaluate the current system and develop goals and strategies, several assessments were done during 2014. An assessment of current trauma capabilities was used to help identify probable trauma level categories for each of the regional hospitals. This allowed planners to look at potential referral patterns and EMS trauma diversion guidelines. A regional education assessment was completed to determine current and future needs for hospital and pre-hospital trauma education. Over the course of 2014 two injury prevention surveys were distributed to hospitals.

During 2014 the final regional bylaws and the official designation as a regional trauma network were completed. The region's three year work plan was also approved leading to the formation of several of our subcommittees to begin work on SMART objectives. Plans for regional injury prevention and the RPRSO were drafted and will be completed in 2015.

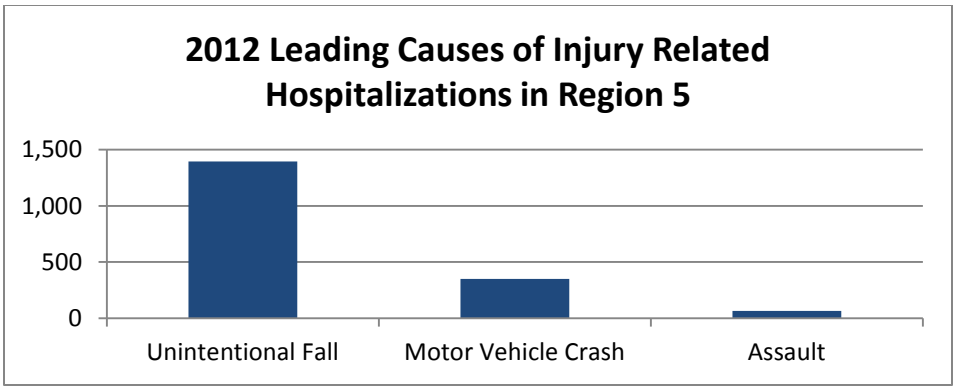
The RTAC made great efforts to insure all agencies are included in the planning and designation process. Voting members are required to submit letters designating them as the agency representative that must be signed by a hospital administrator. This system helps insure information is flowing up the chain of command. Leaders from the region's verified trauma centers have offered their services to do consultative visits to help non-verified hospitals put together a robust trauma care plan.

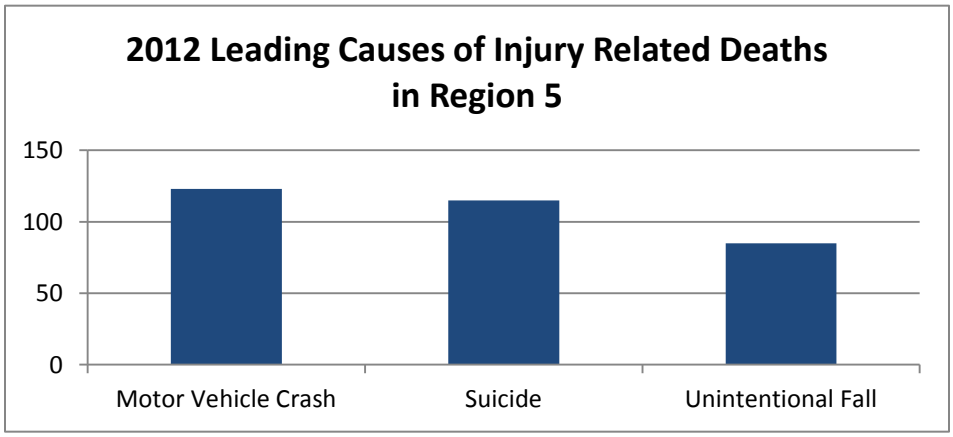
This year's major accomplishments include receiving our initial recognition as a trauma network, having the region's first hospitals designated as trauma facilities, and the development of multiple working subcommittees.

Key focus areas for FY2015 include finalization of regional plans for the RPSRO, injury prevention, and education. The RTAC will be working to develop a way to identify hospital designation levels and EMS destination protocols. Creating regional transfer protocols and formalization of a regional data committee will also be important steps.

EPIDEMIOLOGY

Regional partners have developed planning goals, work plans, and committees based on the most common types of traumatic injuries found in the region. After working closely with state and regional epidemiologists, and gathering data from regional trauma centers and public health partners, Region 5 has chosen to emphasis planning around the following categories: falls, motor vehicle crashes and assaults/suicides.





REGIONAL WORK PLAN

The regional work plan is a three year planning document that provides SMART objectives. The plan is broken down into eleven components, as defined by state trauma rules. The following subsections will provide an update for each of these components.

The plan is broken down into SMART objectives aimed at improving the region's rating against the Health Resources and Services Administration (HRSA) Model Trauma System Matrix. Current planning efforts are focusing on developing baseline activities for the new trauma system.

Each of the following eleven subsections corresponds with the eleven work plan components. The subsection begins with the 2006 HRSA *Model Trauma System Planning and Evaluation* indicator, followed by progress toward that indicator during FY 2014 ("Achievements"), and concluding with objectives for 2015 ("2015 FOCUS").

SYSTEM GOVERNANCE

Each region shall establish a regional trauma network. All MCAs within a region must participate in a regional network, and life support agencies shall be offered membership on the RTAC. Regional trauma advisory committees shall maximize the inclusion of their constituents. The RTN establishes a process to assess, develop, and evaluate the trauma system in cooperation with the regional stakeholders in trauma care.

ACHIEVEMENTS

The RTAC is composed of voting members from each of the 9 county MCAs, two representatives from each hospital, and three EMS agencies. All of these representatives have been approved by their leadership to insure information is making its way through the chain of command. The Injury Prevention and Education Subcommittees have contacts at each facility to improve communications.

2015 FOCUS

Some vacancies exist in the RTAC and RTN leadership. Those will be filled as directed by the bylaws. The addition of 4 EMS practitioners and a consumer will also need to take place.

INJURY PREVENTION

The RTN, in cooperation with other agencies and organizations, uses analytical tools to monitor the performance of population-based (regional) injury prevention programs.

ACHIEVEMENTS

The Injury Prevention Subcommittee meets monthly and has robust attendance. Meeting times and locations have been coordinated with the Education Subcommittee to improve attendance and decrease the number of individual meetings. Two surveys were developed and sent out in 2014, and an outline of the regional injury prevention plan was developed.

2015 FOCUS

The Injury Prevention Subcommittee will finalize a regional injury prevention plan that allows all partners to participate (Hospitals, EMS etc.).

CITIZEN ACCESS TO THE SYSTEM

The trauma system is supported by EMS medical oversight of dispatch procedures and coordinated response resources. The trauma system EMS medical directors are actively involved with the development, implementation, and ongoing evaluation of EMS system dispatch protocols to ensure they are congruent with the trauma system design. These protocols include, but are not limited to, which resources to dispatch Advanced Life Support (ALS) vs. Basic Life Support (BLS), air-ground coordination and early notification of the trauma facility, pre-arrival instructions, and other procedures necessary to ensure dispatched resources are consistent with the needs of injured patients. There are sufficient, well-coordinated air and ground ambulance resources to ensure that EMS providers arrive at the trauma scene to promptly and expeditiously transport the patient to the correct hospital by the correct transportation mode.

ACHIEVEMENTS

Local improvements have been made across the region. Inclusion of regional air transport agencies has improved awareness and spawned educational opportunities for appropriate asset usage. Local EMS protocol change in Berrien County improved the way ambulances divert to higher care centers. Kalamazoo County made significant strides in the development of a central dispatch center.

2015 FOCUS

Development of a regional Emergency Medical Dispatch (EMD) protocol for trauma will be a priority. Working to upgrade those areas that are not currently providing prioritized dispatching remains a high value action.

TRAUMA SYSTEM COMMUNICATIONS

The regional trauma system is supported by a coordinated communication system linking and integrating hospitals, life support agencies, the EMS system, and the RTN. There are established procedures for EMS and trauma system communications for major EMS events, and multiple jurisdiction incidents that are effectively coordinated with the overall regional response plans. There is a procedure for communication among medical facilities when arranging for inter-facility transfers, including contingencies for radio or telephone system failure.

ACHIEVEMENTS

Communication for major EMS events has been an ongoing collaborative effort with the Hospital Preparedness Program and local emergency management. Secondary communication between hospitals will be dovetailed into the main communications plan.

2015 FOCUS

Working with agencies to institutionalize the current communications system will be an important focus for this work plan component. Review of real-world events will provide guidance on system improvement.

MEDICAL OVERSIGHT

The regional trauma system is supported by active EMS medical oversight of trauma communications, pre-hospital triage, treatment, and transport protocols. There is well defined regional trauma system medical oversight integrating the specialty needs of the trauma system and the medical oversight of the overall EMS system. There is a clearly defined, cooperative, and ongoing relationship between regional trauma physician leaders and the EMS system medical directors in the region.

ACHIEVEMENTS

A Medical Oversight Subcommittee has been developed. This group will be meeting quarterly and focus on a wide variety of topics including EMS oversight, triage and transport protocols, and implementation of RPRSO initiatives.

2015 FOCUS

The Medical Oversight Subcommittee will be working on bypass protocols and diversion policies. Improving feedback and education for EMS personnel and trauma centers will also be vital.

PRE-HOSPITAL TRIAGE CRITERIA

The regional trauma system is supported by system-wide pre-hospital triage criteria. The region has adopted mandatory regional pre-hospital triage protocols to ensure trauma patients are transported to an appropriate trauma center based on their injuries. The triage protocols are regularly evaluated and updated to ensure acceptable and region-defined rates of sensitivity and specificity for appropriate identification of a major trauma patient.

ACHIEVEMENTS

A draft EMS triage protocol has gone through the State EMS quality improvement committee for adoption. This will standardize EMS trauma triage once adopted.

2015 FOCUS

The region will work with each of the MCAs to adopt a single triage protocol.

TRAUMA DIVERSION POLICIES

Diversion policies ensure that acute care facilities are integrated into an efficient system to provide optimal care for all injured patients. The regional trauma network plan should ensure that the number, levels, and distribution of trauma facilities are communicated to all partners and stakeholders. The RTN should develop procedures to insure that trauma patients are transported to an appropriate facility that is prepared to provide care. The state trauma registry is used to identify and evaluate regional trauma care and improve the allocation of resources.

ACHIEVEMENTS

Trauma diversion has been taken up by the Medical Oversight Subcommittee and will be a focal point for 2015.

2015 FOCUS

Once facilities have begun the work of identifying a sustainable trauma designation level, the Medical Oversight Subcommittee will work to develop a set of standardized diversion policies.

TRAUMA BYPASS PROTOCOLS

The roles, resources, and responsibilities of trauma care facilities are integrated into a resource efficient, inclusive network that meets standards and provides optimal care for injured patients. The regional trauma plan has clearly defined the roles, resources, and responsibilities of all acute care facilities treating trauma, and of facilities that provide care to specialty populations (spinal cord injury, burns, pediatrics, other). There is a regional trauma bypass protocol that provides EMS guidance for bypassing a trauma care facility for another more appropriate trauma care facility.

ACHIEVEMENTS

Trauma bypass protocols are in place in some areas. A regional plan will be developed once the hospital designation picture becomes clearer.

2015 FOCUS

Working with each of the hospitals to identify a sustainable trauma designation level is the first step toward developing bypass protocols. Each of those activities should be accomplished in 2015.

REGIONAL TRAUMA TREATMENT GUIDELINES

The RTN ensures optimal patient care through the development of regional trauma treatment guidelines. When injured patients arrive at a medical facility that cannot provide the appropriate level of definitive care, there is an organized and regularly monitored system to ensure that the patients are *expeditiously transferred* to the appropriate, system-defined trauma facility. Collected data from a variety of sources is used to review the appropriateness of all-inclusive regional trauma performance standards, from injury prevention through rehabilitation.

ACHIEVEMENTS

The Education Subcommittee has been working to identify base level training for facilities in the region. Once this is completed, standardized treatment schemes and transfer guidelines will be developed and disseminated.

2015 FOCUS

Standardizing training levels will be a major undertaking in 2015. Once completed, a standardized trauma curriculum should be developed as a Continuing Medical Education (CME) package. The utilization of data from regional facilities into transfer guidance should be outlined in 2015 in anticipation of greater data entry into the state system.

REGIONAL QUALITY IMPROVEMENT PLANS

The RTN/RTAC uses system data to evaluate system performance, and regularly reviews system performance reports to develop regional policy. No less than once per year, the RTN generates data reports that are disseminated to all trauma system stakeholders to evaluate and improve system performance.

ACHIEVEMENTS

Data entry is an important project across the region. This year saw the partnership of several hospital systems to insure high quality data and utilization of trauma registrars. As this system continues to become more robust, the RPSRO will begin to examine trends and issues within the system.

2015 FOCUS

The RPRSO Subcommittee will be finalizing their work plan and processes. Initial cases will be "requested reviews" until a larger pool of data is available for study.

TRAUMA EDUCATION

The RTN ensures a competent workforce through trauma education standards. The regional trauma network establishes and ensures that appropriate levels of EMS, nursing, and physician trauma training courses are provided on a regular basis.

ACHIEVEMENTS

The regional trauma Education Subcommittee meets regularly. A regional education survey was developed and distributed to outline the current status of educational initiatives in the region. Identification of instructor assets and training venues began in the second half of 2014.

2015 FOCUS

The major initiative for 2015 will be to develop a training program that can accommodate the large number of personnel needing trauma education. Coordination of Trauma Nursing Core Courses (TNCC) and Advanced Trauma Life Support (ATLS) education will be the primary focus, with rural trauma development and Advanced Trauma Care for Nurses (ATCN) being provided as well.

BEST PRACTICES / SUCCESSES

Region 5's trauma system made great strides in FY2014. The formalization of the region and its component work groups had a profound effect on the development of the trauma system. Partner agencies provided staff for projects, space for meetings, and subject matter expertise ensuring successes were realized across the board.

Amongst the many advancements in the trauma program in FY2014, official recognition as a regional trauma network stands out as the seminal event for the project. Prior to this recognition, the trauma system had lagged and meetings had stalled. The coalition has work tirelessly over the last two years to revitalize the RTAC, develop regional bylaws, and approve a regional work plan. There has been a tremendous resurgence in planning activities. Since then, the RTAC and RTN have put in place 4 subcommittees to lay the groundwork for developing a robust regional trauma system.

Another major accomplishment for 2014 was the development of working subcommittees. Groups are now meeting on a regular basis, some as frequent as monthly, to develop regional plans ahead of hospital designation. Two such subcommittees are Education and Injury Prevention. These groups clearly understand the need for their team to develop products that are required by hospitals as part of their designation. Without their tireless work, the entire system would be delayed.

Additional highlights during FY2014 include the designation of the region's first two trauma centers, and unparalleled cooperation between hospitals. Borgess Medical Center and Bronson Methodist were both designated by the State of Michigan as trauma facilities. This kicks off the designation work that will result in designation of each hospital in the region. Along with receiving designation, Bronson and Borgess have demonstrated a major commitment to the development of the regional system. Both organizations have worked with smaller hospitals to set up trauma programs and offered staff to provide consultative visits across the region. They have also entered into agreements to provide registrar services for other facilities, helping to insure clean data for future RPRSO activities.

SUMMARY

2014 was a year of foundation building and organizational development that will lay the path to great success in coming years. The region opened the year by submitting its first regional plan and bylaws, and gaining recognition as a regional trauma system. Building on this momentum, members of the RTAC s formed subcommittees and work groups to tackle the region's SMART objectives. Regular committee work led to draft injury prevention plans, RPSRO guidelines, and planning for regional trauma education. Regional hospitals improved cooperation with partner agencies by teaming up for data collection and trauma program consultation. The region closed out the year with the inaugural designation of both tertiary trauma centers.

2015 will bring opportunities to operationalize the trauma system. Hospitals will continue the process of trauma program development, and begin to function at their anticipated trauma level. Data collection will begin to drive the system as committees begin to mine information to complete goals. The RPSRO committee will finalize its work plan and begin to review cases with system wide affect.

Special thanks to all the personnel who supported the development of the regional trauma system and worked so hard to move it forward.